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50 Year Bibliography (1942-1992) of the National Systematics Laboratory

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50 Year Bibliography (1942-1992) of the National Systematics Laboratory

Washington, D.C.
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U.S. DEPARTMENT OF COMMERCE
Ronald H. Brown, Secretary

National Oceanic and Atmospheric Administration
D. James Baker, Under Secretary for Oceans and Atmosphere

National Marine Fisheries Service
Nancy Foster, Acting Assistant Administrator for Fisheries

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ABSTRACT

Systematics Laboratory staff has published 445 papers over the last 50 years, 374 in the last 30 years, an average of 12.5 per year. The papers range from species descriptions to large monographs and revisions. Major monographs have clarified and stabilized the nomenclature in important groups such as the tunas, bonitos, Spanish mackerels, penaeoid shrimps, and blue crabs. Many of the papers contain identification keys and summaries of biological and ecological information. A total of 396 new taxa was described, 354 species and subspecies, 39 genera and subgenera, and three families. These taxa are included in 67 different families of fishes, 17 families of crustaceans, and 2 families of mollusks. The 13 families containing the most new species described are the anchovies (Engraulidae) with 28; gobies (Gobiidae), tonguesoles (Cynoglossidae), and mudshrimps (Upogebiidae) each with 19; live-bearing brotulas (Bythitidae) with 18; halfbeaks (Hemiramphidae) with 15; penaeoid shrimps (Penaeidae) with 12; catsharks (Scyliorhinidae) with 11; croakers (Sciaenidae) with 9; and argentines (Argentinidae), needlefishes (Belonidae), toadfishes (Batrachoididae), and cuskeels (Ophidiidae), each with 8.

HISTORY

The origin of the National Systematics Laboratory can be traced back to 15 August 1942, when Samuel F. Hildebrand moved into the Division of Fishes of the National Museum of Natural History to continue his ichthyological research for the Department of the Interior's Bureau of Fisheries; this followed the merger of the Bureau of Fisheries fish collection with that of the U. S. National Museum. The Laboratory, then the National Center for Systematics, was transferred from the Department of the Interior to the National Oceanic and Atmospheric Administration in 1970 and renamed the National Systematics Laboratory. The Laboratory is administered by the Northeast Fisheries Science Center, National Marine Fisheries Service, but also is responsible to the National Marine Fisheries Service Research Council and all of the regional Fisheries Science Centers.

MISSION

The National Systematics Laboratory conducts taxonomic research on marine organisms of economic and ecological value to the United States. In addition to providing taxonomic information on species that are commercially important, scientific studies conducted by Systematics Laboratory personnel comprise significant contributions to the study of marine biodiversity by describing and naming new species as well as revising existing names and descriptions based on new information. Because many important species are widespread or migratory, our research is world-wide.

Accurate taxonomic information is the critical first step in recognizing individual species. Additionally, this information provides an understanding of the diversity of marine communities and is the necessary basis for proper management of our nation's living marine resources. Without a clear understanding of what individual species look like at all stages of their development, where they are found, and what their names are, we cannot collect accurate statistics, develop reasonable national fishing and conservation regulations, set catch limits, or begin to understand the complexity and diversity of marine communities.

The Systematics Laboratory is actively involved in studying the taxonomy and biodiversity of fishes, crustaceans, and squids. We have a permanent staff of four systematists, a systematist emeritus, three museum technicians, a scientific illustrator, and a secretary. The systematists include: ichthyologists Drs. Bruce B. Collette and Thomas A. Munroe; Dr. Michael Vecchione who is a malacologist specializing in squids; and Drs. Austin B. Williams and Isabel Pérez Farfante, decapod crustacean specialists. In addition, we sponsor visiting investigators and currently have two, one from India, Dr. A. Rajaguru, and one from the NOAA National Undersea Research Program, Dr. David Stein.

A unit of the Northeast Fisheries Science Center, National Marine Fisheries Service, we are located in the National Museum of Natural History, where we can take advantage of one of the world's leading systems of collections, libraries, equipment, and facilities that are designed specifically for taxonomic and systematic research. The opportunity to meet and to communicate with other taxonomic experts who reside in or visit the Smithsonian Institution keeps us current on the latest ideas and techniques in the field. As Smithsonian Research Associates, we expand the scientific capabilities of the Smithsonian Institution and help build and curate Smithsonian collections.

The Systematics Laboratory has two major responsibilities, research and service. Our research produces two principal products: 1) worldwide and regional taxonomic monographs, which are scholarly documents that identify, describe, and catalogue the diversity of species within selected taxa of marine organisms of commercial or ecological importance; and 2) various aids to identification including descriptions of new species and development of known species. These documents provide the necessary information for non-specialists to recognize and identify marine organisms.

The Systematics Laboratory serves many public as well as private institutions and individuals worldwide by providing expert identifications and information for a diversity of marine organisms including, but not limited to, the groups we study. We also review and comment upon manuscripts for scientific journals and for colleagues in the National Marine Fisheries Service, other agencies, and academia. Our staff evaluates research proposals for the National Science Foundation, Sea Grant, and similar research funding agencies.

In addition to these activities, staff members serve as officers of various scientific societies and participate in university affairs as research associates and adjunct professors. In this capacity, we teach university courses and supervise graduate students.

FUTURE RESEARCH DIRECTION

The world in 1993 stands face to face with the continued and drastic degradation of the marine environment and overexploitation of its resources. Additionally, and not unrelatedly, the world is also confronted by the biodiversity crisis, which holds witness to the extinction of species at a rate unprecedented in modern history. How will the biodiversity crisis be solved?

The world is slowly awakening to the real and potential importance of systematics in understanding biodiversity. With this comes the recognition that systematics is the field of scientific endeavor that will spearhead the finding of solutions to the biodiversity crisis. The Systematics Laboratory, with its long history of research in marine biodiversity, now stands ready to assume a leadership role in meeting the challenges of the biodiversity crisis. Research results generated by laboratory personnel will provide the systematic knowledge sought by fisheries biologists, ecologists, and conservationists in constructing plans to rationally exploit marine resources, while identifying, preserving, and maintaining marine biodiversity.

BIBLIOGRAPHY

Systematics Laboratory staff members has published 445 papers, 374 in the last 30 years, an average of 12.5 per year. The papers range from species descriptions to large monographs and revisions. A total of 396 new taxa was described, 354 species and subspecies, 39 genera and subgenera, and three families. These taxa are included in 67 different families of fishes, 17 families of crustaceans, and 2 families of mollusks. The 13 families containing the most new species are the anchovies (Engraulidae) with 28; gobies (Gobiidae), tonguesoles (Cynoglossidae), and mud-shrimps (Upogebiidae), each with 19; live-bearing brotulas (Bythitidae) with 18; halfbeaks (Hemiramphidae) with 15; penaeoid shrimps (Penaeidae) with 12; catsharks (Scyliorhinidae) with 11; croakers (Sciaenidae) with 9; and argentines (Argentinidae), needlefishes (Belonidae), toadfishes (Batrachoididae), and cuskeels (Ophidiidae), each with 8.

Table 1. Systematics Laboratory taxonomists and the number of taxa they described from 1942-1992.

	spp. & ssp.	gen. & subgen.	fam.	Total
Hildebrand	88	1	0	89
Ginsburg	67	15	0	82
Mead	13	0	0	13
Cohen	43	7	1	51
Collette	37	1	0	38
Boss	8	1	0	9
Pérez Farfante	18	4	0	22
Williams	48	9	2	59
Springer	14	1	0	15
Munroe	11	0	0	11
Others	7	0	0	7
Totals	354	39	3	396

Some of the new species are of commercial importance. Examples include two Spanish mackerels, the serra Spanish mackerel (*Scomberomorus brasiliensis*) found from Yucatan, Mexico south to Brazil and the Australian spotted mackerel (*S. munroi*). The southern pink shrimp (*Penaeus notialis*)

from the Greater Antilles and the Caribbean coast of South America to southern Brazil, and the Sao Paulo shrimp (*P. paulensis*) from southern Brazil and Uruguay were unrecognized among huge shrimp landings from that region until distinguished and recognized. Likewise, the Gulf stone crab (*Menippe adina*) from the northern and western Gulf of Mexico, thought to differ from the Florida stone crab (*M. mercenaria*), was not proven to do so until formally described.

The staff has also published numerous contributions on development, biogeography, life history, and systematic methodology. Revisions of penaeoid shrimps (*Penaeus*, Pérez Farfante, 1969, 1977, 1980, and 1985); blue crabs (*Callinectes*, Williams, 1974); tunas (*Thunnus*, Gibbs and Collette, 1967); bonitos (Sardini, Collette and Chao, 1975); and Spanish mackerels (*Scomberomorus*, Collette and Russo, 1985) have clarified and stabilized nomenclature and summarized available information on commercially important species treated.

Systematics Laboratory staff have been active in translating the results of their research into identification guides used by a broad segment of the biological and fisheries communities. We have written many family accounts for FAO Species Identification Sheets for several parts of the world. We have prepared FAO Species Catalogues for such important groups as the tunas and mackerels (Collette and Nauen, 1983) and cods and hakes (Cohen et al., 1990), and are currently working on catalogues for the flyingfishes and allies and flatfishes.

Fourteen of the 445 papers were award-winners and are listed before the bibliography and marked with an asterisk (*) in the bibliography.

Table 2. Families in which more than five species or subspecies were described by Systematics Laboratory staff.

FISHES	N
Engraulidae	28
Gobiidae	19
Cynoglossidae	19
Bythitidae	18
Hemiramphidae	15
Scyliorhinidae	11
Sciaenidae	9
Argentinidae	8
Belonidae	8
Batrachoididae	8
Ophidiidae	8
Blenniidae	7
Serranidae	7
Congridae	7
Clupeidae	6
Miscellaneous	219
SHRIMPS	
Upogebiidae	19
Penaeidaae	12
Bresiliidae	6
MOLLUSKS	
Tellinidae	7

SCIENTIFIC STAFF (1942-92)

Samuel F. Hildebrand. 1942-1950
Isaac Ginsburg. 1942-1957
Giles W. Mead. 1951-1959
Daniel M. Cohen. 1958-1981
Bruce B. Collette. 1960-
Kenneth J. Boss. 1962-1966
Isabel Pérez Farfante. 1967-
Stewart Springer. 1967-1971
Austin B. Williams. 1971-
Michael Vecchione. 1986-
Thomas A. Munroe. 1987-

AWARD-WINNING PUBLICATIONS

(marked * in chronological list)

1967. Gibbs, Robert H., Jr. and Bruce B. COLLETTE. Comparative anatomy and systematics of the tunas, genus *Thunnus*. U.S. Fish Wildl. Serv., Fish. Bull. 66(1):65-130. (received superior performance award from BCF)

1969. PÉREZ FARFANTE, Isabel. Western Atlantic shrimps of the genus *Penaeus*. U.S. Fish Wildl. Serv., Fish. Bull. 67(3):461-591. (basis for nomination for Federal Woman's Award)

1970. Cressey, Roger F. and Bruce B. COLLETTE. Copepods and needlefishes: A study in host-parasite relationships. U.S. Fish Wildl. Serv., Fish. Bull. 68(3):347-432. (Honorable Mention in competition for best paper in Fish. Bull. vol. 68)

1974. WILLIAMS, Austin B. The swimming crabs of the genus *Callinectes* (Decapoda: Portunidae). Fish. Bull., U.S. 72(3):685-798. (Honorable Mention in competition for best paper in Fish. Bull. vol. 72)

1975. COLLETTE, Bruce B. and Labbish N. Chao. Systematics and morphology of the bonitos (*Sarda*) and their relatives (Scombridae, Sardini). Fish. Bull., U.S. 73(3):516-625. (NMFS Outstanding Publication Award for best paper in Fish. Bull. vol. 73)

1977. PÉREZ FARFANTE, Isabel. American solenocerid shrimps of the genera *Hymenopenaeus, Haliporoides, Pleoticus, Hadropenaeus* new genus, and *Mesopenaeus* new genus. Fish. Bull., U.S. 75(2):261-346. (Honorable Mention in competition for best paper in Fish. Bull. vol. 75)

1980. PÉREZ FARFANTE, Isabel. Revision of the penaeid shrimp genus *Penaeopsis* (Crustacea: Decapoda). Fish. Bull., U.S. 77(4):721-763. (Honorable Mention in competition for best paper in Fish. Bull. vol. 77)

1984. WILLIAMS, Austin B. The mud crab, *Panopeus herbstii*, s.l., partition into six species (Decapoda: Xanthidae). Fish. Bull., U.S. 81(4):863-882. (Honorable Mention in competition for best paper in Fish. Bull. vol. 81)

1985. COLLETTE, Bruce B. and Joseph L. RUSSO. Morphology, systematics, and biology of the Spanish mackerels (*Scomberomorus*, Scombridae). Fish. Bull., U.S. 82(4):545-692. (NMFS Outstanding Publication Award for best paper in Fish. Bull. vol. 82)

1985. PÉREZ FARFANTE, Isabel. The rock shrimp genus *Sicyonia* Crustacea: Decapoda: Penaeoidea) in the eastern Pacific. Fish. Bull., U.S. 83(1):1-79. (Honorable Mention in competition for best paper in Fish. Bull. vol. 83)

1987. WILLIAMS, Austin B. Lobsters—identification, world distribution, and U.S. trade. Mar. Fish. Rev. 48(2):1-36. (NMFS Outstanding Publication Award for best paper in Mar. Fish. Rev. vol. 48)

1987. PÉREZ FARFANTE, Isabel. Revision of the gamba prawn genus *Pseudaristeus*, with description of two new species (Crustacea: Decapoda: Penaeoidea). Fish. Bull., U.S. 85(2):311-338. (Honorable Mention in competition for best paper in Fish. Bull. vol. 85)

1990. NIZINSKI, Martha S., Bruce B. COLLETTE, and Betsy B. WASHINGTON. Separation of two species of sand lances (*Ammodytes americanus* and *A. dubius* in the western North Atlantic. Fish. Bull., U.S. 88(2):241-255. (Honorable Mention in competition for best paper in Fish. Bull. vol. 88)

1991. MUNROE, Thomas A. Western Atlantic tonguefishes of the *Symphurus plagusia* complex (Cynoglossidae: Pleuronectiformes), with descriptions of two new species. Fish. Bull., U.S. 89(2):247-287. (NMFS Outstanding publication Award for best paper in Fish. Bull. vol. 89)

PUBLICATIONS OF THE SYSTEMATICS LABORATORY

1942

GINSBURG, Isaac. Seven new American fishes. J. Washington Acad. Sci. 32(12):364-370.

1944

GINSBURG, Isaac. A description of a new gobiid fish from Venezuela, with notes on the genus *Garmannia*. J. Washington Acad. Sci. 34(11):375-380.

1945

GINSBURG, Isaac. Contribution to a methodology in the caudal fin ray count of fishes and its use in classification. Copeia 1945(3):133-142.

HILDEBRAND, Samuel F. A review of the American anchovies (family Engraulidae). Bull. Bingham Oceanogr. Coll. 8:1-165.

_____. Notes on the affinity, anatomy, and development of *Elops saurus* Linnaeus. J. Washington Acad. Sci. 33(3):90-94.

1946

GINSBURG, Isaac. Food fishes with fins and scales. Bur. Comm. Fish., Fish Leaflet 8, 7 pp.

HILDEBRAND, Samuel F. A descriptive catalogue of the shore fishes of Peru. Bull. U.S. Nat. Mus. 189, 530 pp.

_____. A list of the fresh-water fishes from San Jose Island, Pearl Islands, Panama. Smithsonian Misc. Coll. 106(3):1-3.

1947

GINSBURG, Isaac. American species and subspecies of *Bathygobius*, with a demonstration of a suggested modified system of nomenclature. J. Washington Acad. Sci. 37(8):275-284.

1948

GINSBURG, Isaac. The species of *Bathystoma* (Pisces, Haemulonidae). Zoologica, N.Y. 33(3):151-156.

HILDEBRAND, Samuel F. A review of the American menhaden, genus *Brevoortia*, with a description of a new species. Smithsonian Misc. Coll. 107(18):1-39.

_____. A new genus and five species of American fishes. Smithsonian Misc. Coll. 110(9):1-15.

1949

HILDEBRAND, Samuel F., and Jose de Paiva Carvalho. Notes on some Brazilian anchovies (family Engraulidae) with description of four new species. Copeia 1948(4):285-296.

_____, and Otis Barton. A collection of fishes from Talara, Peru. Smithsonian Misc. Coll. 3(10):1-36.

1950

GINSBURG, Isaac. Review of the western Atlantic Triglidae fishes). Texas J. Sci. 2(4):489-527.

1951

Böhlke, James E., and Giles W. MEAD. *Physiculus jordani*, a new gadoid fish from deep water off Japan. Stanford Ichthy. Bull. 4(1):27-29.

GINSBURG, Isaac. The eels of the northern Gulf coast of the United States and some related species. Texas J. Sci. 3(3):431-485.

_____. Western Atlantic tonguefishes with descriptions of six new species. Zoologica, N.Y. 36(3):185-201.

MEAD, Giles W. Postlarval *Neothunnus macropterus*, *Auxis thazard*, and *Euthynnus lineatus* from the Pacific coast of Central America. Bull. U.S. Fish Wildl. Serv. no. 63, 52:119-127.

MEAD, Giles W. First record of the gempylid fish *Epinnula orientalis* from American waters. Copeia 1951(4):301.

1952

GINSBURG, Isaac. Eight new fishes from the Gulf coast of the United States with two new genera and notes on geographic distribution. J. Washington Acad. Sci. 42(3):84-101.

_____. Fishes of the family Carangidae of the northern Gulf of Mexico and three related species. Publ. Inst. Mar. Sci. Texas 2(2):43-117.

_____. Flounders of the genus *Paralicthys* and related genera in American waters. U.S. Fish Wildl. Serv., Fish. Bull. no. 71, 52:265-351.

1953

GINSBURG, Isaac. Ten new American gobioid fishes in the United States National Museum, including additions to a revision of *Gobionellus*. J. Washington Acad. Sci. 43(1):18-26.

_____. The taxonomic status and nomenclature of some Atlantic and Pacific populations of yellowfin and bluefin tunas. Copeia 1953(1):1-10.

_____. Western Atlantic scorpionfishes. Smithsonian Misc. Coll. 121(8):1-103.

Hubbs, Carl L., Giles W. MEAD, and Norman J. Wilimovsky. The widespread, probably antitropical distribution and the relationship of the bathypelagic iniomous fish *Anotopterus pharao*. Bull. Scripps Inst. Oceanography 6(5):173-198.

MEAD, Giles W. *Tarletonbeania taylori*, a new lantern fish from the western North Pacific. Zoologica, N.Y. 38(2):105-108.

_____, and James E. Böhlke. *Leptoderma springeri*, a new alepocephalid fish from the Gulf of Mexico. Texas J. Sci. 2:265-267.

_____. *Scopelarchus linguidens*, a new bathypelagic fish from off northern Japan. Japan. J. Ichthy. 2(6):241-245.

_____. A comparison of *Physiculus inbarbatum* and *P. jordani*. Japan. J. Ichthy. 3(1):36-38.

_____, and F.H.C. Taylor. A collection of oceanic fishes from off northeastern Japan. J. Fish. Res. Board Canada 10(8):560-582.

1954

GINSBURG, Isaac. Certain measures of intergradation and divergence. Zoologica, N.Y. 39(1):31-35.

_____. Four new fishes and one little-known species from the east coast of the United States including the Gulf of Mexico. J. Washington Acad. Sci. 44(8):256-264.

_____. Whitings on the coasts of the American continents. U.S. Fish Wildl. Serv., Fish. Bull. no. 96, 56:187-207.

1955

GINSBURG, Isaac. Fishes of the family Percophididae from the coasts of eastern United States and the West Indies, with descriptions of four new species. Proc. U.S. Nat. Mus. 104:623-639.

MEAD, Giles W. Occurrence of the lancet fish, *Alepisaurus ferox*, in the Gulf of Mexico. Copeia 1955(2):148-149.

1956

MEAD, Giles W. *Coloconger raniceps* in the Gulf of Mexico. Copeia 1956(1):62-63.

1957

Böhlke, James E., and Giles W. MEAD. A new blenny from the coast of western Mexico. Notulae Naturae no. 301, 8 pp.

MEAD, Giles W. On the bramid fishes of the Gulf of Mexico. Zoologica, N.Y. 42(2):51-61.

_____. An Atlantic record of the zeoid species *Parazen pacificus* Kamohara. Copeia 1957(3):235-237.

1958

COHEN, Daniel M. Two new species of *Bathylagus* from the western North Atlantic, with notes on other species. Mus. Comp. Zool. Breviora, no. 98, 9 pp.

MEAD, Giles W. *Taractes asper* and the systematic relationships of the Steinegeriidae and Trachyberycidae. Bull. Mus. Comp. Zool. 119(6):393-417.

_____. A new species of iniomous fish from the Gulf of Mexico. J. Washington Acad. Sci. 48(6):188-191.

_____. A catalog of the type specimens of fishes formerly in the collections of the Department of Tropical Research, New York Zoological Society. Zoologica, N.Y. 43(4):131-134.

_____, and James E. Böhlke. *Gobionellus stigmalophius*, a new goby from the Gulf of Campeche and the Great Bahama Bank. Copeia 1958(4):285-289.

1959

COHEN, Daniel M. A remarkable leptocephalus from off the coast of Washington. Deep-Sea Res. 5:238-240.

_____. The scientific name of the common cod. J. Conseil 25(1):50-52.

_____. The geographical history of Argentininae. International Oceanographic Congress. Amer. Assoc. Advanc. Sci. p. 259-260 (Abstract).

MEAD, Giles W. Three new species of archibenthic iniomous fishes from the western N. Atlantic. J. Washington Acad. Sci. 48(11):362-372.

_____. The western Atlantic jawfishes of the opisthognathid genus *Lonchopisthus*. Studies Fauna Suriname Guyanas 5:104-112.

_____. *Bathypterois pectinatus*, a new bathyal iniomous fish from the eastern Pacific. J. Washington Acad. Sci. 49(8):290-292.

_____. Hermaphroditism in archibenthic and pelagic fishes of the order Iniomi. Deep-Sea Res. 6:234-235.

TYLER, James C. Two new flatfishes of the genus *Ancylopsetta* from the Guiana coast. Copeia 1959 (2):139-148.

1960

COHEN, Daniel M. New records of the opisthoproctid genus *Bathylychnops*, with a notice of neoteny in the related genus *Dolichopteryx*. Copeia 1960 (2):147-149.

_____. Notes on a small collection of liparid fishes from the Yellow Sea. Proc. Biol. Soc. Washington 73:15-19.

_____. Isospondyli. 3. Argentinoidea (Argentinidae and Opisthoproctidae). Report on the Scientific Results of the "Michael Sars" North Atlantic Deep-Sea Expedition of 1910, Part 2, 4(9):1-5.

MEAD, Giles W., and Daniel M. COHEN. Review: Key to the names of British fishes, mammals, amphibians, and reptiles by R.D. MacLeod and A list of common and scientific names of fishes from the United States and Canada. Copeia 1960 (4):378-380.

TYLER, James C. Erythrocytes and hemoglobin in the crabeater seal. J. Mammalogy 41(4):527-528.

_____. Note on the flatfishes of the genus *Poecilopsetta* occurring in Atlantic waters. Stanford Ichthy. Bull. 7(4):126-131.

_____. Erythrocyte counts and hemoglobin determinations for two Antarctic nototheniid fishes. Stanford Ichthy. Bull. 7(4):199-201.

1961

COHEN, Daniel M. On the identity of the species of the genus *Argentina* in the Indian Ocean. Galathea Report 5:19-22.

_____. A new genus and species of deepwater ophidioid fish from the Gulf of Mexico. Copeia 1961 (3):288-292.

MEAD, Giles W., and Carl J. Sindermann. Systematics and natural marks. Conseil Permanent Int. Explor. Mer, Rapp. Proc.-Verb. Reunion, 150:9-11.

1962

COHEN, Daniel M. Review: Morphologie und Funktion des Kiefer-und Kiemenapparates von Tiefseefischen der Gattungen *Malacosteus* und *Photostomias* (Teleostei, Isospondyli, Stomiatoidea, Malacosteidae). Copeia 1962(1):239.

COLLETTE, Bruce B. *Astroblepus pholeter*, a new species of cave-dwelling catfish from eastern Ecuador. Proc. Biol. Soc. Washington 75:311-314.

_____. The status of the Bermuda fish population of *Jenkinsia*. Copeia 1962(3):659.

_____. The swamp darters of the subgenus *Hololepis* (Pisces, Percidae). Tulane Stud. Zool. 9(4):115-211.

_____. *Hemiramphus bermudensis*, a new halfbeak from Bermuda, with a survey of endemism in Bermudian shore fishes. Bull. Mar. Sci. Gulf Caribbean 12(3):432-449.

_____, and Ralph W. Yerger. The American percid fishes of the subgenus *Villora*. Tulane Stud. Zool. 9(4):213-230.

MEAD, Giles W. *Lychnoculus mirabilis* Murray, 1877 (Pisces): Proposed rejection of both generic and specific names as *nomina oblita*. Bull. Zool. Nomenclature, 19(5):295-296.

1963

COHEN, Daniel M. A new genus and species of bathypelagic ophidioid fish from the western North Atlantic. Breviora no. 196, 8 pp.

_____. The publication dates of Goode and Bean's "Oceanic Ichthyology." J. Soc. Bibliogr. Nat. Hist. 4(3):162-166.

_____, and Menico Torchio. Comments on the identity of the Mediterranean fish *Strinsia tinca*. Ann. Mag. Nat. Hist., ser. 13, 6:389-390.

COLLETTE, Bruce B. Review: Collected Works, Volume IV, Ichthyology, by L.S. Berg. Copeia 1963(1):215-216.

_____. The systematic status of the Gulf of Mexico butterfish, *Poronotus burti* (Fowler). Copeia 1963(3):582-583.

_____. The first record of the short bigeye, *Pseudopriacanthus altus*, from the Caribbean Sea. Copeia 1963(3):591.

_____. The subfamilies, tribes, and genera of the Percidae (Teleostei). Copeia 1963(4):615-623.

_____, and Robert H. Gibbs, Jr. A preliminary review of the fishes of the family Scombridae. Proc. World Sci. Meeting Biol. Tunas and Related Species, FAO Fish. Rep. no. 6, vol. 1:23-32.

_____. Preliminary field guide to the mackerel- and tuna-like fishes of the Indian Ocean (Scombridae). Smithsonian Institution, Washington, D.C., 48 pp.

_____, Frank H. Talbot, and Richard H. Rosenblatt. The first California record of sierra, *Scomberomorus sierra* Jordan and Starks. Calif. Fish Game 49(1):53-54.

HILDEBRAND, Samuel F. Family Elopidae. In: Fishes of the western North Atlantic. Mem. Sears Found. Mar. Res. 1(3):111-131.

_____. Family Albulidae. In: Fishes of the western North Atlantic. Mem. Sears Found. Mar. Res. 1(3):132-147.

_____. Family Engraulidae. In: Fishes of the western North Atlantic. Mem. Sears Found. Mar. Res. 1(3):152-249.

_____. Family Clupeidae. In: Fishes of the western North Atlantic. Mem. Sears Found. Mar. Res. 1(3):257-454.

1964

BOSS, Kenneth J. A note on the synonymy of *Tellina subtrigona* Sowerby, 1866 (Mollusca: Bivalvia). Veliger 6(4):207-208.

_____. The status of *Scrobicularia viridotincta* Carpenter (Mollusca: Bivalvia). Veliger 6(4): 208-210.

_____. Unionidae of Red Cedar River, Michigan. Nautilus 77(4):117-118.

_____. Notes on a hybrid *Tellina* (Tellinidae). Nautilus 78(1):18-20.

_____. New species of *Tellina* from the western Atlantic. Occ. Pap. Mollusks 2(29):309-324.

_____, and Vida C. Kenk. Anatomy and relationships of *Temnoconcha brasiliana* Dall. Occ. Pap. Mollusks 2(30):325-344.

COHEN, Daniel M. Suborder Argentinoidea. In: Fishes of the western North Atlantic. Mem. Sears Found. Mar. Res. 1(4):1-70.

_____. A review of the ophidioid fish genus *Oligopus* with the description of a new species from West Africa. Proc. U.S. Nat. Mus. 116(3494):22 pp.

_____. Bioluminescence in the Gulf of Mexico anacanthine fish *Steindachneria argentea*. Copeia 1964(2):406-409.

_____. *Lycenchelys bullisi*, a new eelpout from the Gulf of Mexico. Proc. Biol. Soc. Washington 77:113-118.

_____. A review of the ophidioid fish genus *Luciobrotula* with the description of a new species from the western North Atlantic. Bull. Mar. Sci. Gulf Caribbean 14(3):387-398.

COLLETTE, Bruce B. Review: Fishes of the northern seas of the U.S.S.R., by A. P. Andriashev. Copeia 1964(2):465.

_____, and Robert H. Gibbs, Jr. *Thunnus* South, 1845 (Pisces): Proposed validation under the plenary powers. Z.N.(S.) 1652. Bull. Zool. Nomenclature 21(6):442-443.

MEAD, Giles W., E. Bertelsen, and Daniel M. COHEN. Reproduction among deep-sea fishes. Deep-Sea Res. 11:569-596.

1965

BOSS, Kenneth J. A new mollusk (Bivalvia, Erycinidae) commensal on the stomatopod crustacean *Lysiosquilla*. Amer. Mus. Novitates, No. 2215, 11pp.

_____. Note on *Lima (Acesta) angolensis*. Nautilus 79(2):54-58.

_____. Catalogue of the family Pandoridae (Mollusca, Bivalvia). Occas. Pap. Mollusks 2(33):413-424.

_____. Symbiotic erycinacean bivalves. Malacologia 3(2):183-195.

_____. Convergence of an acentric sculptural trait in the Tellinacea. Ann. Rep. 1965, Amer. Malacological Union, p. 5-6 (Abstract).

_____, and Arthur S. Merrill. The family Pandoridae in the western Atlantic. Johnsonia 4(44):181-215.

_____. Degree of host specificity in two species of *Odostomia* (Pyramidellidae: Gastropoda). Proc. Malacological Soc. London 36(6):349-355.

_____. Benthic ecology and faunal change in the estuary of the Patuxent River. Ann. Rep. 1965, Amer. Malacological Union, p. 17 (Abstract).

COLLETTE, Bruce B. Hemiramphidae (Pisces, Synentognathi) from tropical West Africa. Atlantide Report No. 8:217-235.

_____. Systematic significance of breeding tubercles in fishes of the family Percidae. Proc. U.S. Nat. Mus. 117:567-614.

_____, and Petru Bănărescu. Review: Fishes of the Black Sea by A.N. Svetovidov. Copeia 1965 (4):523-525.

_____, and Frederick H. Berry. Recent studies on the needlefishes (Belonidae): an evaluation. Copeia 1965(3):386-392.

1966

Böhlke, James E., and Daniel M. COHEN. A new shallow-water ophidioid fish from the tropical West Atlantic. Notulae Naturae, No. 396, 7 pp.

BOSS, Kenneth J. The subfamily Tellininae in the western Alantic: The genus *Tellina* (Part I). Johnsonia 4(45):217-272.

COHEN, Daniel M. A new tribe and a new species of ophidioid fish. Proc. Biol. Washington 79: 183-204.

_____. The North Pacific deepsea fish name *Bathylagus milleri* Gilbert, a senior synonym of *Bathylagus alascanus* Chapman. Copeia 1966(4):877-878.

COLLETTE, Bruce B. A review of the venomous toadfishes, subfamily Thalassophryninae. Copeia 1966(4):846-864.

_____. *Belonion*, a new genus of fresh-water needlefishes from South America. Amer. Mus. Novitates, No. 2274, 22 pp.

_____. Revue critique des types de Scombridae des collections du Muséum National d'Histoire Naturelle de Paris. Bull. Mus. Nat. Hist. Nat. Paris 38(4): 362-375.

_____, and Frederick H. Berry. Proposed suppression of three *nomina oblita* in the family Belonidae (Pisces). Z.N.(S.) 1723. Bull. Zool. Nomenclature 22(5/6):325-329.

Eschmeyer, William N., and Bruce B. COLLETTE. The scorpionfish subfamily Setarchinae, including the genus *Ectreposebastes*. Bull. Mar. Sci. 16(2):349-375.

MEAD, Giles W. Family Aulopidae. In: Fishes of the western North Atlantic. Mem. Sears Found. Mar. Res. 1(5):19-29.

_____. Family Bathysauridae. In: Fishes of the western North Atlantic. Mem. Sears Found. Mar. Res. 1(5): 103-113.

_____. Family Bathypteroidae. In: Fishes of the western North Atlantic. Mem. Sears Found. Mar. Res. 1(5): 114-146.

_____. Family Ipnopidae. In: Fishes of the western North Atlantic. Mem. Sears Found. Mar. Res. 1(5): 147-161.

_____. Family Chlorophthalmidae. In: Fishes of the western North Atlantic. Mem. Sears Found. Mar. Res. 1(5):162-189.

Merrill, Arthur S., and Kenneth J. BOSS. Benthic ecology and faunal change relating to oysters from a deep basin in the lower Patuxent River, Maryland. Proc. Nat. Shellfish. Assoc. 56:81-87.

1967

BOSS, Kenneth J., N.K. Ebbs, and W.C. Stewart. *Montacuta floridana* commensal with annelid *Onuphis magna*. Nautilus 80(4):144-145.

_____, and Donald R. Moore. Notes on *Malleus* (*Parimalleus*) *candeanus* (d'Orbigny) (Mollusca: Bivalvia). Bull. Mar. Sci. 17(1):85-94.

COLLETTE, Bruce B. Further comments on suppression of some names in the family Belonidae (Pisces). Z.N.(S.) 1723. Bull. Zool. Nomenclature 24(4): 196-199.

_____. The taxonomic history of the darters (Percidae: Etheostomatini). Copeia 1967(4):814-819.

_____, and Leslie W. Knapp. Catalog of type specimens of the darters (Pisces, Percidae, Etheostomatini). Proc. U.S. Nat. Mus. 119, 88 pp.

_____, and David B. Wake. Request for a ruling to correct homonymy in names of the family-groups based on *Plethodus* (Pisces) and *Plethodon* (Caudata). Z.N.(S.) 1803. Bull. Zool. Nomenclature 24 (4):252-254.

*Gibbs, Robert H., Jr., and Bruce B. COLLETTE. Comparative anatomy and systematics of the tunas, genus *Thunnus*. U.S. Fish Wildl. Serv., Fish. Bull. 66(1):65-130.

Kato, Susumu, Stewart SPRINGER, and Mary H. Wagner. Field guide to eastern Pacific and Hawaiian sharks. U.S. Fish Wildl. Serv., Circular 271, 49 pp.

PÉREZ FARFANTE, Isabel. A new species and two new subspecies of shrimp of the genus *Penaeus* from the western Atlantic. Proc. Biol. Soc. Washington 80:83-99.

1968

BOSS, Kenneth J. The subfamily Tellininae in the western Atlantic. The genera *Tellina* (Part II) and *Tellidora*. Johnsonia 4(46):273-344.

COHEN, Daniel M. The cyclopterid genus *Paraliparis*, a senior synonym of *Gymnolycodes* and *Eutelichthys*, with the description of a new species from the Gulf of Mexico. Copeia 1968(2):384-388.

COLLETTE, Bruce B. *Strongylura timucu* (Walbaum): a valid species of western Atlantic needlefish. Copeia 1968(1):189-192.

_____. *Daector schmitti*, a new species of venomous toadfish from the Pacific coast of Central America. Proc. Biol. Soc. Washington 81:155-159.

Nielsen, Jørgen G., and Daniel M. COHEN. Redescription of *Bellottia apoda* Giglioli, 1883 (Pisces, Ophidioidea). Proc. Linnean Soc. London 179(1): 99-106.

Peters, James A., and Bruce B. COLLETTE. The role of time-share computing in museum research. Curator 11(1):65-75.

Slaughter, Bob H., and Stewart SPRINGER. Replacement of rostral teeth in sawfishes and sawsharks. Copeia 1968(3):499-506.

1969

BIRDSONG, Ray S., and Leslie W. Knapp. *Etheostoma collettei*, a new darter of the subgenus *Oligocephalus* from Louisiana and Arkansas. Tulane Stud. Zool. Bot. 15(3):106-112.

BOSS, Kenneth J. The subfamily Tellininae in the western Atlantic. The genus *Strigilla*. Johnsonia 4(47):345-368.

COHEN, Daniel M. Names of fishes. Comm. Fish. Rev. 31(5):18-20.

_____. Review: Fish Migration by F. R. Harden Jones. Science 163:923.

_____, and Samuel P. ATSAIDES. Additions to a revision of argentinine fishes. Fish. Bull., U.S. 68(1):13-36.

COLLETTE, Bruce B. Review: The freshwater fishes of Fernando Poo by D.F.E. Thys van den Audenaerde. Syst. Zool. 18(2):236-237.

_____, and John A. MacPhee, Jr. First Massachusetts Bay record of the Arctic shanny *Stichaeus punctatus*. J. Fish. Res. Bd. Canada 26(5):1375-1377.

_____, Robert H. Gibbs, Jr., and George E. CLIPPER. Vertebral numbers and identification of the two species of dolphin (*Coryphaena*). Copeia 1969(3): 630-631.

Davis, William P., and Daniel M. COHEN. A gobiid fish and palaemonid shrimp living on an antipatharian sea whip in the tropical Pacific. Bull. Mar. Sci. 18(4):749-761.

Matsumoto, Walter M., Frank H. Talbot, Bruce B. COLLETTE, and Richard S. Shomura. Pacific bonito (*Sarda chiliensis*) and skipjack tuna (*Katsuwonus pelamis*) without stripes. Copeia 1969(2):397-398.

*PÉREZ FARFANTE, Isabel. Western Atlantic shrimps of the genus *Penaeus*. U.S. Fish Wildl. Serv., Fish. Bull. 67(3):461-591.

SPRINGER, Stewart. *Triakis fehlmanni*, a new shark from the coast of Somalia. Proc. Biol. Soc. Washington 81:613-624.

_____, and Richard A. Waller. *Hexanchus vitulus*, a new six gill shark from the Bahamas. Bull. Mar. Sci. 19(1):159-174.

1970

COHEN, Daniel M. A new argentinid fish from Hawaii. Pac. Sci. 24(3):377-378.

_____. How many Recent fishes are there? Proc. Calif. Acad. Sci., 4th ser., 38(17):341-346.

COHEN, Daniel M., and David Dean. Sexual maturity and migratory behaviour of the tropical eel, *Ahlia egmontis*. Nature 227:189-190.

_____, and C. Richard Robins. A new ophidioid fish (genus *Lucifuga*) from a limestone sink, New Providence Island, Bahamas. Proc. Biol. Soc. Washington 83:133-144.

COLLETTE, Bruce B. *Rastrelliger kanagurta*, another Red Sea immigrant into the Mediterranean Sea, with a key to the Mediterranean species of Scombridae. Bull. Sea Fish. Res. Sta. Haifa 54:3-6.

_____, and N.V. Parin. Needlefishes (Belonidae) of the eastern Atlantic Ocean. Atlantide Rep. 11:7-60.

*Cressey, Roger F., and Bruce B. COLLETTE. Copepods and needlefishes: A study in host-parasite relationships. Fish. Bull., U.S. 68(3):347-432.

PÉREZ FARFANTE, Isabel. Diagnostic characters of juveniles of the shrimps *Penaeus aztecus aztecus*, *P. duorarum duorarum*, and *P. brasiliensis* (Crustacea, Decapoda, Penaeidae). U.S. Fish Wildl. Serv., Spec. Sci. Rep., Fish. 599:26 pp.

_____. Sinopsis de datos biológicos sobre el camarón blanco *Penaeus schmitti* Burkenroad, 1936. FAO Fish. Rep. 57, 4:1417-1438.

SPRINGER, Stewart, and Victor Sadowsky. Subspecies of the western Atlantic cat shark, *Scyliorhinus retifer*. Proc. Biol. Soc. Washington 83:83-98.

Wiley, Martin L., and Bruce B. COLLETTE. Breeding tubercles and contact organs in fishes: Their occurrence, structure, and significance. Bull. Amer. Mus. Nat. Hist. 143(3):143-216.

1971

COHEN, Daniel M. Nomenclature of the gadid fish genus *Phycis*. Copeia 1971(2):327-328.

COLLETTE, Bruce B. Review: The fishes of Zanzibar by Playfair and Günther, reprinted edition. Copeia 1971(4):766-767.

Compagno, Leonard J.V., and Stewart SPRINGER. *Iago*, a new genus of carcharhinid sharks, with a redescription of *I. omanensis*. Fish. Bull., U.S. 69(3):615-626.

PÉREZ FARFANTE, Isabel. Caracteristicas diagnósticas de los juveniles de *Penaeus aztecus subtilis*, *P. duorarum notialis* y *P. brasiliensis* (Crustacea, Decapoda, Penaeidae). Mem. Soc. Cienc. Nat. La Salle 30(87):159-182.

_____. Western Atlantic shrimps of the genus *Metapenaeopsis* (Crustacea, Decapoda, Penaeidae), with descriptions of three new species. Smithsonian Contrib. Zool. 79, 37pp.

_____. Range extension of the shrimp *Penaeus (Melicertus) brasiliensis* Latreille, 1817 (Decapoda, Penaeidae). Bull. Mar. Sci. 21(3):745-747.

_____. A key to the American Pacific shrimps of the genus *Trachypenaeus* (Decapoda, Penaeidae), with the description of a new species. Fish. Bull., U.S. 69(3):635-646.

SPRINGER, Stewart. It began with a shark. In: Dissertations on Steno as a Geologist. Acta Historica Scientiarum Naturalium et Medicinalium. Ed. Univ. Hauniensis 23:308-319.

_____. Three species of skates (Rajidae) from the continental waters of Antarctica. Antarctic Res. Ser. 17:1-10.

_____. A new cat shark (Scyliorhinidae) from New Zealand. Rec. Dominion Mus., Wellington 7(18): 235-241.

_____, and Bruce B. COLLETTE. The Gulf of Guinea stingray, *Dasyatis rudis*. Copeia 1971(2):338-341.

1972

COHEN, Daniel M. Summary. In: The Panamic Biota: Some observations prior to a sea-level canal. Bull. Biol. Soc. Washington 2:261-266.

_____, and Jørgen G. Nielsen. A review of the viviparous ophidioid fishes of the genus *Saccogaster*. Proc. Biol. Soc. Washington 85:445-468.

COLLETTE, Bruce B. Conclusions. In: Results of the Tektite Program: Ecology of coral reef fishes. Nat. Hist. Mus. Los Angeles Co., Sci. Bull. 14:171-174.

_____, Daniel M. COHEN, and James A. Peters. Stability in zoological nomenclature. Science 177:452-453.

_____, and Sylvia A. Earle, eds. Results of the Tektite Program: Ecology of coral reef fishes. Nat. Hist. Mus. Los Angeles Co., Sci. Bull. 14, 180 pp.

_____, and Frank H. Talbot. Activity patterns of coral reef fishes with emphasis on nocturnal-diurnal changeover. In: Results of the Tektite Program: Ecology of coral reef fishes. Nat. Hist. Mus. Los Angeles Co., Sci. Bull. 14:98-124.

_____, and Teruya Uyeno. *Pontinus niger*, a synonym of the scorpionfish *Ectreposebastes imus*, with extension of its range to Japan. Japan. J. Ichthy. 19(1):26-28.

PÉREZ FARANTE, Isabel. *Tanypenaeus caribeus*, a new genus and species of the shrimp family Penaeidae (Crustacea, Decapoda) from the Caribbean Sea. Bull. Mar. Sci. 22(1):185-195.

_____. Review: A handbook on a Pakistani marine prawn *Penaeus* by Nasima Tirmizi and Khan Badar-Un-Nisa. Crustaceana 22(2):208.

SPRINGER, Stewart, and Jeannette D. D'Aubrey. Two new scyliorhinid sharks from the east coast of Africa with notes on related species. South African Asso. Mar. Biol. Res., Oceanog. Res. Inst., Invest. Rep. 29:1-19.

WILLIAMS, Austin B. A ten-year study of meroplankton in North Carolina estuaries: mysid shrimps. Chesapeake Sci. 13(4):254-262.

_____. Review: Guide to identification of marine and estuarine invertebrates, Cape Hatteras to the Bay of Fundy, by Kenneth L. Gosner. Trans. Amer. Fish. Soc. 101(3):570-571.

_____. Decapod crustaceans of the Chesapeake Bay. In: Biota of the Chesapeake Bay. Chesapeake Sci. 13(Supplement):S119-S121.

1973

COHEN, Daniel M. Families Argentinidae, Bathylagidae, Opisthoproctidae, Bregmacerotidae, Eretmophoridae, and Melanonidae. In: Check-list of the fishes of the northeastern Atlantic and of the Mediterranean, J.C. Hureau and T. Monod, eds., UNESCO, pp. 152-157, 321-327.

_____. Zoogeography of the fishes of the Indian Ocean. In: The biology of the Indian Ocean. Ecological studies, 3, Springer-Verlag, p. 451-463.

_____. Viviparous ophidioid fish genus *Calamopteryx*: new species from western Atlantic and Galapagos. Proc. Biol. Soc. Washington 86:339-350.

COLLETTE, Bruce B. *Hyporhamphus australis* x *Hy. melanochir*, a hybrid halfbeak (Hemiramphidae) from Australia. Fish. Bull., U.S. 71(1):318-321.

_____. *Daector quadrizonatus*, a valid species of freshwater venomous toadfish from the Rio Truando, Colombia with notes on additional material of other species of *Daector*. Copeia 1973(2):355-357.

_____. Obituary: James A. Peters, 1922-1972. Copeia 1973(2):388-390.

_____, and Wayne F. King. Endangered wildlife. Copeia 1973(2):390-392.

KARNELLA, Charles. The systematic status of *Merluccius* in the tropical western Atlantic Ocean including the Gulf of Mexico. Fish. Bull., U.S. 71(1):83-91.

Marshall, Norman B., and Daniel M. COHEN. Order Anacanthini (Gadiformes), characters and synopsis of families. In: Fishes of the western North Atlantic. Mem. Sears Found. Mar. Res. 1(6):479-495.

PÉREZ FARFANTE, Isabel. Morphological study of diagnostic characters in western Atlantic *Hepomadus* (Crustacea, Decapoda, Penaeidae). Fish. Bull., U.S. 71(2):441-453.

_____, and Harvey R. Bullis. Western Atlantic shrimps of the genus *Solenocera* with description of a new species (Crustacea: Decapoda: Penaeidae). Smithsonian Contrib. Zool. No. 153, 33 pp.

SPRINGER, Stewart. Families Odontaspidae, Mitsukurinidae, Lamnidae, Cetorhinidae, Alopiidae, Orectolobidae, Scyliorhinidae, and Pseudotriakidae. In: Check-list of the fishes of the northeastern Atlantic and of the Mediterranean, J.C. Hureau and T. Monod, eds., UNESCO, pp. 11-22.

1974

COHEN, Daniel M. The gadoid fish genus *Halargyreus* (Family Eretmophoridae) in the southern hemisphere. J. Roy. Soc. New Zealand 3(4):629-634.

_____. The ophidioid fish genus *Luciobrotula* in the Hawaiian Islands. Pac. Sci. 28(2):109-110.

_____. A review of the pelagic ophidioid fish genus *Brotulataenia* with descriptions of two new species. Zool. J. Linnean Soc. 55(2):119-149.

_____. Names of fishes. Mar. Fish. Rev. 36(12):21-23.

Johnson, Robert Karl, and Daniel M. COHEN. Revision of the chiasmodontid fish genera *Dysalotus* and *Kali*, with descriptions of two new species. Arch. Fisch. Wiss. 25(1/2):13-46.

Nielsen, Jørgen G., and Daniel M. COHEN. A review of the viviparous ophididoid fishes of the genera *Bythites* Reinhardt and *Abythites* new (Pisces, Ophidioidei). Streenstrupia, Zool. Mus., Univ. Copenhagen 3(8):71-88.

COLLETTE, Bruce B. The garfishes (Hemiramphidae) of Australia and New Zealand. Rec. Australian Mus. 29(2):11-105.

_____. *Potamorrhaphis petersi*, a new species of freshwater needlefish (Belonidae) from the upper Orinoco and Rio Negro. Proc. Biol. Soc. Washington 87(5):31-40.

_____. *Strongylura hubbsi*, a new species of freshwater needlefish from the Usumacinta Province of Guatemala and Mexico. Copeia 1974(3):611-619.

_____. A review of the coral toadfishes of the genus *Sanopus* with descriptions of two new species from Cozumel Island, Mexico. Proc. Biol. Soc. Washington 87:185-204.

_____. South American freshwater needlefishes (Belonidae) of the genus *Pseudotylosurus*. Zool. Meded. Rijks. Nat. Hist. Leiden, 48(16):169-186.

_____. Geographic variation in the Central Pacific halfbeak, *Hyporhamphus acutus* (Günther). Pac. Sci. 28(2):111-122.

PÉREZ FARFANTE, Isabel. Range extension of *Penaeus (Litopenaeus) occidentalis* Streets, 1871 (Decapoda, Penaeidae) into the Golfo de Tehuantepec. Crustaceana 27(3):316-319.

WILLIAMS, Austin B. *Allactaea lithostrota*, a new genus and species of crab (Decapoda: Xanthidae) from North Carolina, U.S.A. Proc. Biol. Soc. Washington 87:19-26.

_____. Marine flora and fauna of the northeastern United States. Crustacea: Decapoda. NOAA Tech. Rept. NMFS Circ. 389, 50 pp.

*_____. The swimming crabs of the genus *Callinectes* (Decapoda: Portunidae). Fish. Bull., U.S. 72(3): 685-798.

_____. Two new axiids (Crustacea: Decapoda: Thalassinidea: *Calocaris*) from North Carolina and the Straits of Florida. Proc. Biol. Soc. Washington 87:451-464.

_____. A new species of *Hysophrys* (Decapoda: Homolidae) from the Straits of Florida, with notes on related crabs. Proc. Biol. Soc. Washington 87:485-492.

_____, Thomas E. Bowman, and David M. DAMKAER. Distribution, variation, and supplemental description of the opossum shrimp, *Neomysis americana* (Crustacea: Mysidacea). Fish. Bull., U.S. 72(3):835-842.

1975

COHEN, Daniel M. Moridae a senior synonym of Eretmophoridae in gadiform fishes. Copeia 1975 (2):382.

COLLETTE, Bruce B. Review: A History of Fishes by J.R. Norman, 3rd revised edit. Copeia 1975 (4):790.

*_____, and Labbish N. Chao. Systematics and morphology of the bonitos (*Sarda*) and their relatives (Scombridae, Sardini). Fish. Bull., U.S. 73(3): 516-625.

DAMKAER, David M. Calanoid copepods of the genera *Spinocalanus* and *Mimocalanus* from the Central Artic Ocean, with a review of the Spinocalanidae. NOAA Tech. Rept. NMFS Circ. 391, 88 pp.

PÉREZ FARFANTE, Isabel. Spermatophores and thelyca of the American white shrimps, genus *Penaeus*, subgenus *Litopenaeus*. Fish. Bull., U.S. 73(3):463-486.

Wourms, John P., and Daniel M. COHEN. Trophotaeniae, embryonic adaptations, in the viviparous ophidioid fish, *Oligopus longhursti*: A study of museum specimens. J. Morph. 147(4): 385-401.

1976

COHEN, Daniel M., and John P. Wourms. *Microbrotula randalli*, a new viviparous ophidioid fish from Samoa and New Hebrides, whose embryos bear trophotaeniae. Proc. Biol. Soc. Washington 89:81-98.

COLLETTE, Bruce B. Indo-West Pacific halfbeaks (Hemiramphidae) of the genus *Rhynchorhamphus* with descriptions of two new species. Bull. Mar. Sci. 26(1):72-98.

_____, and Ernest A. Lachner. Fish collections in the United States and Canada. Copeia 1976(3):625-642.

Lachner, Ernest A., James W. Atz, George W. Barlow, Bruce B. COLLETTE, Robert J. Lavenberg, C. Richard Robins, and Jack R. Schultz. A national plan for ichthyology (abstracted from the report of the Advisory Committee for the Development of a National Plan for Ichthyology). Copeia 1976(3): 618-625.

PÉREZ FARFANTE, Isabel. A redescription of *Penaeus* (*Melicertus*) *canaliculatus* (Olivier, 1811), a wide-ranging Indo-West Pacific shrimp (Crustacea, Decapoda, Penaeidae). Zool. Meded. 50(2):23-37.

WILLIAMS, Austin B. Distinction between a Gulf of Mexico and a Carolinian Atlantic species of the swimming crab *Ovalipes* (Decapoda: Portunidae). Proc. Biol. Soc. Washington 89:205-214.

_____. Integumental organs of unknown function on chelipeds of deep-sea crabs, genus *Hypsophrys*. J. Morph. 150(4):889-899.

1977

COHEN, Daniel M. Swimming performance of the gadoid fish *Antimora rostrata* at 2400 meters. Deep-Sea Res. 24:275-277.

_____. Ten dives of the DSRV ALVIN in and near the DWD-106 dumpsite, 25 July - 3 August, 1975. Introduction, station data, general observations and conclusions. Baseline Report of Environmental Conditions in Deepwater Dumpsite 106. NOAA Dumpsite Evaluation Report 77-1, vol. III, Contaminent Inputs and Chemical Characteristics - Appendix, p. 595-609. U.S. Dept. Commerce, NOAA, Nat. Ocean Survey. Rockville, Md.

_____. Observations from the DSRV ALVIN on populations of benthic fishes and selected larger invertebrates in and near DWD-106. Baseline Report of Environmental Conditions in Deepwater Dumpsite 106. NOAA Dumpsite Evaluation Report 77-1, vol. II, Biological Characteristics, p. 423-450. U. S. Dept. Commerce, NOAA, Nat. Ocean Survey. Rockville, Md.

COLLETTE, Bruce B. Epidermal breeding tubercles and bony contact organs in fishes. Symp. Zool. Soc. London 39:225-268.

_____, and Petru Bănărescu. Systematics and zoogeography of the fishes of the family Percidae. J. Fish. Res. Bd. Canada 34(10):1450-1463.

_____, and Klaus Rützler. Reef fishes over sponge bottoms off the mouth of the Amazon River. Proc. 3rd Intern. Coral Reef Symp., Rosenstiel School Mar. Atmos. Sci., Univ. Miami, 1:305-310.

_____, M.A. Ali, K.E.F. Hokanson, Maria Nagięć, S.A. Smirnov, J.E. Thorpe, A.H. Weatherley, and J. Willemsen. Biology of the percids. J. Fish. Res. Bd. Canada 34(10):1890-1899.

MATTHEWS, Frances D., David M. DAMKAER, Leslie W. Knapp, and Bruce B. COLLETTE. Food of western North Atlantic tunas (*Thunnus*) and lancetfishes (*Alepisaurus*). NOAA Tech. Rept. NMFS SSRF-706, 19 pp.

*PÉREZ FARFANTE, Isabel. American solenocerid shrimps of the genera *Hymenopenaeus*, *Haliporoides*, *Pleoticus*, *Hadropenaeus* new genus, and *Mesopenaeus* new genus. Fish. Bull., U.S. 75(2): 261-346.

_____. Range extensions of the shrimps *Solenocera necopina* Burkenroad and *Parapenaeus americanus* Rathbun (Crustacea, Decapoda, Penaeoidea). Proc. Biol. Soc. Washington 90(3):597-599.

WILLIAMS, Austin B., Kevin J. Shaw, and Thomas S. Hopkins. *Stilbomastax*, a new genus of spider crab (Majidae: Tychinae) from the West Indies region, with notes on American relatives. Proc. Biol. Soc. Washington 90(4):884-893.

1978

COHEN, Daniel M. Families Argentinidae, Brotulidae, Gadidae, Moridae, and Ophidiidae. In: FAO Species Identification Sheets for Fishery Purposes, Western Central Atlantic (Fishing Area 31), W. Fischer, ed., vols. I-V (unpaginated).

_____. Review: Francis Day (1829-1889) and his collections of Indian fishes, by P.J.P. Whitehead and P.K. Talwar. Copeia 1978(2):377.

_____, and Jørgen G. Nielsen. Guide to the identification of genera of the fish order Ophidiiformes with a tentative classification of the order. NOAA Tech. Rept. NMFS Circ. 417, 72 pp.

COLLETTE, Bruce B. Families Batrachoididae, Belonidae, Coryphaenidae, Hemiramphidae, Lamprididae, Pomatomidae, Rachycentridae, Scombridae, and Xiphiidae. In: FAO Species Identification Sheets for Fishery Purposes, Western Central Atlantic (Fishing Area 31), W. Fischer, ed., vols. I-V (unpaginated).

_____, Joseph L. RUSSO, and Luis A. Zavala-Camin. *Scomberomorus brasiliensis*, a new species of Spanish mackerel from the western Atlantic. Fish. Bull., U.S. 76(1):273-280.

_____, and N. V. Parin. Five new species of halfbeaks (Hemiramphidae) from the Indo-West Pacific. Proc. Biol. Soc. Washington 91(3):731-747.

PÉREZ FARFANTE, Isabel. Intersex anomalies in shrimp of the genus *Penaeopsis* Crustacea: (Penaeidae). Fish. Bull., U.S. 73:687-691.

_____. Shrimps and prawns. In: FAO Species Identification Sheets for Fishery Purposes, Western Central Atlantic (Fishing Area 31), W. Fischer, ed., vol. VI (unpaginated).

WILLIAMS, Austin B. Transfer to *Pseudomedaeus* of the xanthid crab *Micropanope distinctus* (Rathbun). Proc. Biol. Soc. Washington 91(2):546-557.

_____. True crabs. In: FAO Species Identification Sheets for Fishery Purposes, Western Central Atlantic (Fishing Area 31), W. Fischer, ed.,vol. VI (unpaginated).

_____, and Roland L. Wigley. Distribution of decapod Crustacea off northeastern United States based on specimens at the Northeast Fisheries Center, Woods Hole, Massachusetts. NOAA Tech. Rept. NMFS Circ. 407, 44 pp.

1979

COHEN, Daniel M. Notes on the morid fish genera *Lotella* and *Physiculus* in Japanese waters. Japan. J. Ichthy. 26:3(225-230).

_____. Visit to the Peoples Republic of China. Copeia 1979(2):379-380.

_____, and Joseph L. RUSSO. Variation in the fourbeard rockling, *Enchelyopus cimbrius*, a North Atlantic gadid fish, with comments on the genera of rocklings. Fish. Bull., U.S. 77(1):91-104.

COLLETTE, Bruce B. Adaptations and systematics of the mackerels and tunas. In: The Physiological Ecology of Tunas, G.D. Sharp and A.E. Dizon, eds., Academic Press, p. 7-39.

_____, and Joseph L. RUSSO. An introduction to the Spanish mackerels, genus *Scomberomorus* In: Proceedings of the Mackerel Colloquium, E.L. Nakamura and H.R. Bullis, eds., Gulf States Mar. Fish. Comm. 4:3-16.

Herbst, Gary N., Austin B. WILLIAMS, and Billy B. BOOTHE. Reassessment of northern geographic limits for decapod crustacean species in the Carolinian Province, USA; some major range extensions itemized. Proc. Biol. Soc. Washington 91(4): 989-998.

PÉREZ FARFANTE, Isabel. *Penaeopsis jerryi*, new species from the Indian Ocean (Crustacea: Penaeoidea). Proc. Biol. Soc. Washington 92(1): 208-215.

_____, and Boris G. Ivanov. Range extension of *Penaeopsis serrata* (Crustacea: Penaeoidea) to off New Jersey and Rio Grande do Sul. Proc. Biol Soc. Washington 92(1):204-207.

Robins, C. Richard, Daniel M. COHEN, and Catherine H. Robins. The eels, *Anguilla* and *Histiobranchus*, photographed on the floor of the deep Atlantic in the Bahamas. Bull. Mar. Sci. 29(3):401-405.

SPRINGER, Stewart. A revision of the catsharks, family Scyliorhinidae. NOAA Tech. Rep. NMFS Circ. 422, 152 pp.

WILLIAMS, Austin B. A new crab family from shallow waters of the West Indies (Crustacea: Decapoda: Brachyura). Proc. Biol. Soc. Washington 92(2): 399-413.

_____, and Thomas W. Duke. Crabs (Arthropoda: Crustacea: Decapoda: Brachyura). In: Pollution Ecology of Estuarine Invertebrates, C.W. Hart and S.M. Fuller, eds., Chap. 6, Academic Press, pp. 171-233.

1980

COHEN, Daniel M. Names of the hakes. Mar. Fish. Rev. 42:2-3.

COLLETTE, Bruce B. Specimen banking marine organisms. In: Monitoring Environmental Materials and Specimen Banking, Proceedings of the International Workshop, N.-P. Luepke, ed., Martinus Nijhoff Publishers, p. 165-167.

_____, and Joseph L. RUSSO. *Scomberomorus munroi*, a new species of Spanish mackerel from Australia and New Guinea. Australian J. Mar. Freshw. Res. 31:241-250.

Parin, N.V., Bruce B. COLLETTE, and Yu. N. Shcherbachev. Preliminary review of the marine halfbeaks (Hemiramphidae, Beloniformes) of the tropical Indo-West Pacific. Trudy Inst. Okean., Akad. Nauk SSSR 97:7-173 (In Russian).

*PÉREZ FARFANTE, Isabel. Revision of the penaeid shrimp genus *Penaeopsis* (Crustacea: Decapoda). Fish. Bull., U.S. 77(4):721-763.

_____. A new species of rock shrimp of the genus *Sicyonia* (Penaeoidea), with a key to the western Atlantic species. Proc. Biol. Soc. Washington 93(3): 771-780.

_____, and D. L. Grey. A new species of *Solenocera* (Crustacea: Decapoda: Solenoceridae) from northern Australia. Proc. Biol. Soc. Washington 93(2): 421-434.

WILLIAMS, Austin B. A new crab family from the vicinity of submarine thermal vents on the Galapagos Rift (Crustacea: Decapoda: Brachyura). Proc. Biol. Soc. Washington 93(2):443-472.

1981

COHEN, Daniel M. *Saccogaster melanomycter* (Ophidiiformes: Bythitidae), a new fish species from the Caribbean. Proc. Biol. Soc. Washington 94(2): 374-377.

_____. New and rare ophidiiform fishes from the eastern Atlantic. Canary Islands to Cape of Good Hope. Proc. Biol. Soc. Washington 94(4):1085-1103.

_____. Families Argentinidae, Gadidae and Moridae. In: FAO Species Identification Sheets for Fishery Purposes, Eastern Central Atlantic (Fishing Areas 34, 47), W. Fischer, G. Bianchi, and W.B. Scott, eds., Dept. Fish. and Oceans, Canada.

COLLETTE, Bruce B. Families Belonidae, Coryphaenidae, Hemiramphidae, Pomatomidae, Rachycentridae, Scombridae, and Xiphiidae. In: FAO Species Identification Sheets for Fishery Purposes, Eastern Central Atlantic (Fishing Areas 34, 47), W. Fischer, G. Bianchi, and W.B. Scott, eds., Dept. Fish. and Oceans, Canada.

_____, and Joseph L. RUSSO. A revision of the scaly toadfishes, genus *Batrachoides*, with descriptions of two new species from the eastern Pacific. Bull. Mar. Sci. 31(2):197-233.

_____, and B.R. Smith. Bluefin tuna, *Thunnus thynnus orientalis*, from the Gulf of Papua. Japan. J. Ichthy. 28(2):166-168.

PÉREZ FARFANTE, Isabel. *Solenocera alfonso*, a new species of shrimp (Penaeoidea: Solenoceridae) from the Philippines. Proc. Biol. Soc. Washington 94(2):631-639.

_____, and Billy B. BOOTHE, JR. *Sicyonia martini*, a new rock shrimp (Decapoda: Penaeoidea) from the American Pacific. J. Crust. Biol. 1(3):424-432.

RUSSO, Joseph L. Field guide to fishes commonly taken in long line operations in the western North Atlantic Ocean. NOAA Tech. Rep. NMFS Circ. 435, 51 pp.

SMALL, Gregg J. A review of the bathyal fish genus *Antimora* (Moridae: Gadiformes). Proc. Calif. Acad. Sci. 42(13):341-348.

WILLIAMS, Austin B. Western Atlantic species of the caridean shrimp genus *Ogyrides*. J. Crust. Biol. 1(1):143-147.

_____, and David McN. Williams. Carolinian records for American lobster, *Homarus americanus*, and tropical swimming crab, *Callinectes bocourti*. Postulated means of dispersal. Fish. Bull., U.S. 79(1):192-198.

Yabe, Mamoru, Daniel M. COHEN, Kiyoshi Wakabayashi, and Tomio Iwamoto. Fishes new to the eastern Bering Sea. Fish. Bull., U.S. 79(2): 353-356.

1982

COHEN, Daniel M. The deepsea fish genus *Enchelybrotula* (Ophidiidae): Description of new species, notes on distribution, and osteology. Bull. Mar. Sci. 32(1):99-111.

_____, and J. Barry Hutchins. Description of a new *Dinematichthys* (Ophidiiformes: Bythitidae) from Rottnest Island, Western Australia. Rec. West. Aust. Mus. 9(4):341-347.

_____, and Jørgen G. Nielsen. *Spottobrotula amaculata*, a new ophidiid fish from the Philippines. Copeia 1982(3):497-500.

COLLETTE, Bruce B. Review: Synopses of biological data on eight species of scombrids, W. H. Bayliff, ed. Copeia 1982(1):242.

_____. Two new species of freshwater halfbeaks (Pisces: Hemiramphidae) of the genus *Zenarchopterus* from New Guinea. Copeia 1982(2):265-276.

_____. Status of two names for South African halfbeaks, *Hyporhamphus delagoae* (Barnard) and *Hyporhamphus improvisus* (Smith). Copeia 1982(3): 719-721.

_____. Rediscovery of *Hyporhamphus xanthopterus*, a halfbeak endemic to Vembanad Lake, Kerala, southern India. Matsya 7:29-40.

_____. South American freshwater needlefishes of the genus *Potamorrhaphis* (Beloniformes: Belonidae). Proc. Biol. Soc. Washington 95(4):714-747.

Factor, Jan Robert, Cindy Lee Van Dover, and Austin B. WILLIAMS. Development of the mouthparts and setae of the hydrothermal vent crab *Bythograea*. Amer. Zool. 22(4):874 (abstract).

PÉREZ FARFANTE, Isabel. Review: El mar de Puerto Rico. Una introduccion a las pesquerias de la Isla, by Jose A. Suarez Caabro. Ciencia Interamericana 22(2):68.

_____. The geminate shrimp species *Parapenaeus longirostris* and *Parapenaeus politus* (Crustacea: Decapoda: Penaeoidea). Quaderni del Laboratorio di Tecnologia della Pesca, Ancona, Italy 3(2-5): 187-205.

_____, and Boris G. Ivanov. *Mesopenaeus mariae*, a new species of shrimp (Penaeoidea: Solenoceridae), the first record of the genus in the Indo-West Pacific. J. Crust. Biol. 2(2):303-313.

WILLIAMS, Austin B. Revision of the genus *Latreillia* Roux (Brachyura: Homoloidea). Quaderni del Laboratorio di Tecnologia della Pesca, Ancona, Italy (2-5):227-255.

_____, and Fenner A. Chace, Jr. A new caridean shrimp of the family Bresiliidae from thermal vents of the Galapagos Rift. J. Crust. Biol. 2(1):136-147.

1983

COLLETTE, Bruce B. Review: Resources of tunas and related species and their fisheries in the Indian Ocean by E.G. Silas and P.P. Pillai. Copeia 1983(2):575.

_____. Review: Multilingual dictionary of names of marine food-fishes of world fauna by G.U. Lindberg, A. S. Heard, and T. S. Rass. Copeia 1983(2): 575-576.

_____. Mangrove fishes of New Guinea. In: Biology and ecology of mangroves, H.J. Teas, ed., Tasks for Vegetation Science 8:91-102. W. Junk, The Hague.

_____. Recognition of two species of double-lined mackerels (*Grammatorcynus*: Scombridae). Proc. Biol. Soc. Washington 96(4):715-718.

_____. Two new species of coral toadfishes, family Batrachoididae, genus *Sanopus*, from Yucatan, Mexico, and Belize. Proc. Biol. Soc. Washington 96(4):719-724.

_____, and Cornelia E. Nauen. FAO Species Catalogue. Vol. 2. Scombrids of the world. An annotated and illustrated catalogue of tunas, mackerels, bonitos and related species known to date. FAO Fish. Synop. No. 125, vol. 2, 137 pp.

Cressey, Roger F., Bruce B. COLLETTE, and Joseph L. RUSSO. Copepods and scombrid fishes: A study in host-parasite relationships. Fish. Bull., U.S. 81(2):227-265.

MOORE, Keiko Hiratsuka, and Bruce B. COLLETTE. Review: Dictionary of Japanese fish names and their foreign equivalents. Ichthyological Society of Japan. Copeia 1983(2):576-577.

PÉREZ FARFANTE, Isabel. Camarones. In: INFOPESCA. Catalogo de especies marinas de interes economico actual o potencial para America Latina, Pt 2. Pacifico centro y suroriental, N. Chirichigno, W. Fischer, and C.E. Nauen, eds., Rome, FAO/PNUD, SIC/82/22:363-381.

_____, and Horton H. Hobbs, Jr. Obituary: Alejandro Villalobos Figueroa, 1918-1982. J. Crust. Biol. 3(3):492-495.

WILLIAMS, Austin B. Marine decapod crustaceans of the Carolinas. Fishery Bulletin 65:1-298, 1965. Citation Classic. Current Contents 14(17):20.

_____, and Cindy L. Van Dover. A new species of *Munidopsis* from submarine thermal vents of the east Pacific rise at 21°N (Anomura: Galatheidae). Proc. Biol. Soc. Washington 96(3):481-488.

Van Dover, Cindy L., Austin B. WILLIAMS, and Jan R. Factor. The first zoeal stage of a hydrothermal vent crab (Decapoda: Brachyura: Bythograeidae). Amer. Zool. 23(4):982 (abstract).

COHEN, Daniel M. Families Bregmacerotidae and Moridae. In: FAO Species Identification Sheets for Fishery Purposes, Western Indian Ocean (Fishing Area 51), FAO, W. Fischer and G. Bianchi, eds., 7 pp.

COLLETTE, Bruce B. Families Belonidae, Coryphaenidae, Hemiramphidae, Rachycentridae, and Scombridae. In: FAO Species Identification Sheets for Fishery Purposes, Western Indian Ocean (Fishing Area 51), FAO, W. Fischer and G. Bianchi, eds., 46 pp.

_____. Status of the systematics of the Scombroidei. In: Proceedings of the 35th Annual Tuna Conference, A.E. Dizon, ed., Southwest Fish. Center Admin. Rept. LJ-84-35:33 (abstract).

_____. Atherinomorpha: Introduction. In: Ontogeny and systematics of fishes. Amer. Soc. Ich. Herp. Spec. Publ. No. 1:334.

_____, G.E. McGowen, N.V. Parin, and S. Mito. Beloniformes: Development and relationships. In: Ontogeny and systematics of fishes. Amer. Soc. Ich. Herp. Spec. Publ. No. 1:335-354.

_____, T. Potthoff, W.J. Richards, S. Ueyanagi, J.L. Russo, and Y. Nishikawa. Scombroidei: Development and relationships. In: Ontogeny and systematics of fishes. Amer. Soc. Ich. Herp. Spec. Publ. No. 1:591-620.

_____, and M.M. Smith. Family Pomatomidae. In: FAO Species Identification Sheets for Fishery Purposes, Western Indian Ocean (Fishing Area 51), FAO, W. Fischer and G. Bianchi, eds., vol. 3, 4 pp.

Lachner, E.A., and Bruce B. COLLETTE. Family Echeneidae. In: FAO Species Identification Sheets for Fishery Purposes, Western Indian Ocean (Fishing Area 51), FAO, W. Fischer and G. Bianchi, eds., vol. 2, 4 pp.

*WILLIAMS, Austin B. The mud crab, *Panopeus herbstii*, s.l., partition into six species (Decapoda: Xanthidae). Fish. Bull., U.S. 81(4):803-882.

_____. Review: Shallow-water crabs by R.W. Ingle. Estuaries 7(3):266-267.

_____. Review: Crustacean phylogeny ed. by F. R. Schram. Amer. Sci. 72(5):514-515.

_____. Shrimps, lobsters, and crabs of the Atlantic coast of the eastern United States, Maine to Florida. Smithsonian Institution Press, 550 pp.

Millikin, M.R., and Austin B. WILLIAMS. Synopsis of biological data on the blue crab, *Callinectes sapidus* Rathbun. NOAA Tech. Rep. NMFS 1, 39 pp.

Reames, R.C., and Austin B. WILLIAMS. Mud crabs of the *Panopeus herbstii* H. M. Edw., s.l., complex in Alabama, U.S.A. Fish. Bull., U.S. 81(4):883-890.

Sullivan, B., K. Miller, K. Singleton, A.G. Scheer, and Austin B. WILLIAMS. Electrophoretic analyses of hemocyanins from four species of mud crabs, genus *Panopeus*, with observations on the ecology of *P. obesus*. Fish. Bull., U.S. 81(4):883-885.

van der Elst, R.P., and Bruce B. COLLETTE. Game fishes of the east coast of southern Africa. 2. Biology and systematics of the queen mackerel, *Scomberomorus plurilineatus*. S. Afr. Assoc. Mar. Biol. Res., Oceanogr. Res. Inst. Invest. Rep. No. 55:1-12.

Van Dover, C.L., Austin B. WILLIAMS, and J.R. Factor. The first zoeal stage of a hydrothermal vent crab (Decapoda: Brachyura: Bythograeidae). Proc. Biol. Soc. Washington 97(2):413-418.

1985

COLLETTE, Bruce B. *Zenarchopterus ornithocephala*, a new species of freshwater halfbeak (Pisces: Hemiramphidae) from the Vogelkop Peninsula of New Guinea. Proc. Biol. Soc. Washington 98(1): 107-111.

*_____, and Joseph L. RUSSO. Morphology, systematics, and biology of the Spanish mackerels (*Scomberomorus*, Scombridae). Fish. Bull., U.S. 82(4):545-692.

_____. Interrelationships of the Spanish mackerels (Pisces: Scombridae: *Scomberomorus*) and their copepod parasites. Cladistics 1(2):141-158.

*PÉREZ FARFANTE, Isabel. The rock shrimp genus *Sicyonia* (Crustacea: Decapoda: Penaeoidea) in the eastern Pacific. Fish. Bull., U.S. 83(1):1-79.

_____. New locality records for *Cryptopenaeus catherinae* De Freitas and *Benthesicymus bartletti* S.I. Smith (Decapoda, Penaeoidea). Crustaceana 48:316-318.

_____, and Brian Kensley. *Cryptopenaeus crosnieri*, a new species of shrimp and a new record of *C. sinensis* (Penaeoidea: Solenoceridae) from Australian waters. Proc. Biol. Soc. Washington98(1):281-287.

WILLIAMS, Austin B. Summary comments. In: Hydrothermal vents of the eastern Pacific: An overview, M.L. Jones, ed. Bull. Biol. Soc. Washington 6:489-493.

Van Dover, C.L., J.R. Factor, Austin B. WILLIAMS, and C.J. Berg, Jr. Reproductive patterns of decapod crustaceans from hydrothermal vents. In: Hydrothermal vents of the eastern Pacific: An overview, M.L. Jones, ed. Bull. Biol. Soc. Washington 6:223-227.

1986

Bishop, G.A., and Austin B. WILLIAMS. The fossil lobster *Linuparus canadensis*, Carlile Shale (Cretaceous), Black Hills. Nat. Geogr. Res. 2(3):372-387.

COHEN, Daniel M. Families Bregmacerotidae, Moridae, and Melanonidae. In: Fishes of the north-eastern Atlantic and Mediterranean, P.J.P. Whitehead et al., eds., UNESCO, 2:711-724.

_____. Families No. 61, Argentinidae, pp. 215-216; No. 62, Bathylagidae, p. 216; No. 88, Gadidae, p. 324; No. 89, Merlucciidae, pp. 325-326; No. 90, Moridae, pp. 326-328; No. 91, Melanonidae, pp. 328-329; and No. 98 Bythitidae, pp. 354-356. In: Smiths' Sea Fishes, M.M. Smith and P.C. Heemstra, eds., Macmillan South Africa, Johannesburg, 1047 pp.

COLLETTE, Bruce B. Resilience of the fish assemblage in New England tidepools. Fish. Bull., U.S. 84(1):200-204.

_____. Hemiramphidae. In: Check-list of the freshwater fishes of Africa, J. Daget, J.-P. Gosse, and D.F.E. Thys van den Audenaerde, eds., 2:163-164.

_____. Families Coryphaenidae and Scombridae. In: Fishes of the north-eastern Atlantic and Mediterranean, P.J.P. Whitehead et al., eds., UNESCO, 2:845-846, 981-997.

_____. Families No. 113, Belonidae, pp. 385-387; No. 115, Hemiramphidae, pp. 388-391; and No. 249, Scombridae, pp. 831-838. In: Smiths' Sea Fishes, M.M. Smith and P.C. Heemstra, eds., Macmillan South Africa, Johannesburg, 1047 pp.

_____. Revision of the frigate tunas, genus *Auxis*. Proc. 37th Ann. Tuna Conf., Southwest Fish. Center. Admin. Rept. H-86-19:35 (Abstract).

_____. Obituary: Sally Leonard Richardson, 1944-1986. Copeia 1986(4):1043-1045.

_____, and Roger F. Cressey. Occurrence of *Caligus coryphaenae* on *Thunnus thynnus* by Hogans (1985): Corrections (Copepoda, Caligidae). Crustaceana 51(1):220.

_____, and N.V. Parin. Families Belonidae and Hemiramphidae. In: Fishes of the north-eastern Atlantic and Mediterranean, P.J.P. Whitehead et al., eds., UNESCO, 2:604-609, 620-622.

COLLETTE, Bruce B., and Joseph L. RUSSO. Systematic status of the suborder Scombroidei. In: Indo-Pacific Fish Biology: Proc. 2nd Int. Conf. Indo-Pacific Fishes, p. 938 (abstract).

_____, and Jinxiang Su. The halfbeaks (Pisces, Beloniformes, Hemiramphidae) of the Far East. Proc. Acad. Nat. Sci. Philadelphia 138(1):250-302.

Nielsen, J.G., and Daniel M. COHEN. Family No. 96, Ophidiidae, pp. 345-350. In: Smiths' Sea Fishes, M.M. Smith and P.C. Heemstra, eds., Macmillan South Africa, Johannesburg, 1047 pp.

PÉREZ FARFANTE, Isabel, and Billy B. BOOTHE, Jr. Redescription and range extension of the shrimp *Parapenaeopsis balli* (Decapoda: Penaeidae). J. Crustacean Biol. 6(3):401-407.

Tyler, J.C., G.D. Johnson, I. Nakamura, and Bruce B. COLLETTE. *Luvarus imperialis* (Luvaridae): An oceanic acanthuroid. In: Indo-Pacific Fish Biology: Proc. 2nd Int. Conf. Indo-Pacific Fishes, p. 960 (abstract).

WILLIAMS, Austin B. Mud shrimps (*Upogebia*) of the eastern Pacific (Thallasinoidea: Upogebiidae). San Diego Soc. Nat. Hist. Mem. 14:1-60.

_____. Foreword. In: Estuarine variability, D.A. Wolfe, ed., Academic Press, Inc., N.Y. 509 pp.

_____, and D.L. Felder. Analysis of stone crabs: *Menippe mercenaria* (Say), restricted, and a previously unrecognized species described (Decapoda: Xanthidae). Proc. Biol. Soc. Washington 99(3):-517-543.

_____, and Peter A. Rona. Two new caridean shrimps (Bresiliidae) from a hydrothermal field on the Mid-Atlantic Ridge. J. Crust. Biol. 6(3):446-462.

_____, and Ruth D. Turner. Squat lobsters (Galatheidae: *Munidopsis*) associated with mesh-enclosed wood panels submerged in the deep sea. J. Crust. Biol. 6(3):617-624.

COLLETTE, Bruce B. Review: The systematics community. Copeia 1987(1):261-264.

Grier, H.J., and Bruce B. COLLETTE. Unique spermatozeugmata in testes of halfbeaks belonging to the genus *Zenarchopterus* (Teleostei: Hemiramphidae). Copeia 1987(2):300-311.

Johnson, G.D., and Betsy B. WASHINGTON. Larvae of the moorish idol, *Zanclus cornutus*, including a comparison with other larval acanthuroids. Bull. Mar. Sci. 40(3):494-511.

Nasci, R.S., S.G.F. Hare, and Michael VECCHIONE. Habitat associations of mosquito and copepod species. J. Am. Mosq. Contr. Assoc. 3(4):593-600.

*PÉREZ FARFANTE, Isabel. Revision of the gamba prawn genus *Pseudaristeus*, with descriptions of two new species (Crustacea: Decapoda: Penaeoidea). Fish. Bull., U.S. 85(2):311-338.

Wetherbee, D.K., and Austin B. WILLIAMS. The late eighteenth century paintings by Rabie of Haitian mollusks and crustaceans. Further contributions on the history of zoology in Hispaniola, Art. 3:18-48. Privately published, Shelburne, MA.

WILLIAMS, Austin B. More records for shrimps of the genus, *Rimicaris* (Decapoda: Caridea: Bresiliidae) from the mid-Atlantic Rift. J. Crustacean Biol. 7(1):105.

*_____. Lobsters—identification, world distribution, and U. S. trade. Mar. Fish. Rev. 48(2):1-36.

_____. *Upogebia synagelas*, new species, A commensal mud shrimp from sponges in the western Central Atlantic (Decapoda: Upogebiidae). Proc. Biol. Soc. Washington 100(3):590-595.

WONGRATANA, Thosaporn. Four new species of clupeoid fishes (Clupeidae and Engraulidae) from Australian waters. Proc. Biol. Soc. Washington 100(1):104-111.

WONGRATANA, Thosaporn. Two new species of anchovies of the genus *Stolephorus* (Engraulidae), with a key to species of *Engraulis*, Encrasicholina, and *Stolephorus*. Amer. Mus. Novitates 2876, 8 pp.

1988

Bishop, G., and Austin B. WILLIAMS. Fossil crabs from the Teepee Buttes of South Dakota. Amer. Zool. 28(4):2A (abstract).

COLLETTE, Bruce B., and Karsten W. Hartel. An annotated list of the fishes of Massachusetts Bay. NOAA Tech. Memo. NMFS-F/NEC-51, 70 pp.

PÉREZ FARFANTE, Isabel. Illustrated key to penaeoid shrimps of commerce in the Americas. NOAA Tech. Rep. NMFS 64, 32 pp.

VECCHIONE, Michael. Commercial fishing for gulf butterfish, *Peprilus burti*, in the Gulf of Mexico. Mar. Fish. Rev. 49(4):14-22.

_____. In-situ observations on a large squid-spawning bed in the eastern Gulf of Mexico. Malacologia 29(1):135-141.

_____. Variability in the distribution of late-stage oyster larvae in the Calcasieu Estuary. Contrib. Mar. Sci. 30:77-90.

WILLIAMS, Austin B. Notes on decapod and euphausiid crustaceans, continental margin, western Atlantic, Georges Bank to western Florida, USA. Fish. Bull., U.S. 86(1):67-76.

_____. New marine decapod crustaceans from waters influenced by hydrothermal discharge, brine and hydrocarbon seepage. Fish. Bull., U.S. 86(2): 263-287.

_____. Conjoined twin adult shrimp (Decapoda: Penaeidae). Fish. Bull., U.S. 86(3):595-597.

_____. Indo-Pacific spiny lobsters in the U.S. National Museum of Natural History collected from 1963 to 1981. Crustaceana 55(3):313-316.

_____, with collaboration of I. Dore. Lobsters of the world - An illustrated guide, lobsters of the world in U.S. trade. Osprey Books, Huntington, NY, 186 pp.

1989

Bishop, Gale A., and Austin B. WILLIAMS. Taphonomy and preservation of burrowing thalassinidean shrimps. 28th Int. Geol. Congr., Washington, D.C., July 9-19, Abstracts, Vol. 1:156.

Felley, James D., Michael VECCHIONE, G.R. Gaston, and S.M. Felley. Habitat selection by demersal nekton: Analysis of videotape data. Northeast Gulf Sci. 10(2):69-84.

MUNROE, Thomas A., and M.N. Mahadeva. *Symphurus callopterus*, (Cynoglossidae, Pleuronectiformes), a new deepwater tongue fish from the eastern Pacific. Proc. Biol. Soc. Washington 102(2):458-467.

NIZINSKI, Martha S. Ecological distribution, demography, and behavioral observations on *Periclimenes anthopilus*, an atypical symbiotic "cleaner" shrimp. Bull. Mar. Sci. 45(1):174-188.

Springer, Victor G., and Bruce B. COLLETTE. Obituary: Robert H. Gibbs, Jr., 1929-1988. Copeia 1989(1):245-251.

Tyler, James C., G. David Johnson, Izumi Nakamura, and Bruce B. COLLETTE. Morphology of *Luvarus imperialis* (Luvaridae), with a phylogenetic analysis of the Acanthuroidei (Pisces). Smithsonian Contrib. Zool. No. 485, 78 pp.

VECCHIONE, Michael. Zooplankton distribution in three estuarine bayous with different types of anthropogenic influence. Estuaries 12(3):169-179.

_____, Clyde F.E. Roper, and Michael J. Sweeney. Marine flora and fauna of the eastern United States. Mollusca: Cephalopoda. NOAA Tech. Rep. NMFS 73, 23 pp.

WILLIAMS, Austin B., L.G. Abele, D.L. Felder, H.H. Hobbs, Jr., R.B. Manning, P.A. McLaughlin, and Isabel PEREZ FARFANTE. Common and scientific names of aquatic invertebrates from the United States and Canada. Decapod crustaceans. Amer. Fish. Soc. Spec. Publ. 17, 77 pp.

_____, and C. Alan Child. Comparison of some genera and species of box crabs (Brachyura: Calappidae) of the southwestern North Atlantic with description of a new genus and species. Fish. Bull., U.S. 87(1):105-121.

_____, and P.J.B. Scott. *Upogebia corallifora*, a new species of coral-boring shrimp from the West Indies (Decapoda: Upogebiidae). Proc. Biol. Soc. Washington 102(2):405-410.

1990

COHEN, Daniel M., Tadashi Inada, Tomio Iwamoto, and Nadia Scialabba. Gadiform fishes of the world (Order Gadiformes). FAO Species Catalogue, FAO Fish. Synop. No. 125, 10, 442 pp.

COLLETTE, Bruce B. Problems with gray literature in fishery science. In: Writing for Fishery Journals. J. Hunter, ed., Spec. Symp. Amer. Fish. Soc., p. 27-31.

Kensley, Brian, and Austin B. WILLIAMS. *Axiopsis eximia*, a new thalassinidean shrimp (Crustacea, Decapoda, Axiidae) from the Middle Eocene of South Carolina. J. Paleontol. 64(5):798-802.

Mahadeva, M.N., and Thomas A. MUNROE. Three new species of symphurine tonguefishes from tropical and warm temperate waters of the eastern Pacific (*Symphurus*: Cynoglossidae: Pleuronectiformes). Proc. Biol. Soc. Washington 103(4):931-954.

MUNROE, Thomas A. *Symphurus melanurus* Clark, 1936 a senior synonym for the eastern Pacific tonguefishes, *S. seychellensis* Chabanaud, 1955 and *S. sechurae* Hildebrand, 1946. Copeia 1990(1): 229-232.

_____. Eastern Atlantic tonguefishes (*Symphurus*: Cynoglossidae, Pleuronectiformes), with descriptions of two new species. Bull. Mar. Sci. 47(2):464-515.

_____, and Martha S. NIZINSKI. *Symphurus melasmatotheca* and *S. undecimplerus* (Cynoglossidae, Pleuronectiformes), two new eastern Pacific tonguefishes with eleven caudal-fin rays. Copeia 1990(4):985-996.

*NIZINSKI, Martha S., Bruce B. COLLETTE, and Betsy B. WASHINGTON. Separation of two species of sand lances (*Ammodytes americanus* and *A. dubius*) in the western North Atlantic. Fish. Bull., U.S. 88(2):241-255.

Poss, Stuart G., and Bruce B. COLLETTE. *Scorpaenodes immaculatus*, a new species of scorpionfish (Osteichthyes: Scorpaenidae) from Walters Shoals, Madagascar Ridge. Proc. Biol. Soc. Washington 103(3):543-549.

VECCHIONE, Michael, and V.A. Hand. Digestive-gland histology in paralarval squids (Cephalopoda: Loliginidae). Fish. Bull., U.S. 87(4):995-1000.

WILLIAMS, Austin B. Mud shrimps (Thalassinoidea: Upogebiidae) from the western Atlantic. International Crustacean Conference, Brisbane, Australia; 2-6 July 1990, Conference Handbook, p. 109 (abstract).

_____, and K. Baba. New squat lobsters (Galatheidae) from the Pacific Ocean: Mariana Back Arc Basin, East Pacific Rise, and Cascadia Basin. Fish. Bull., U.S. 87(4):899-910.

_____, and E.B. Boschi. *Panopeus margentus*, a new crab from the Argentine warm temperate subregion (Decapoda: Xanthidae). Proc. Biol. Soc. Washington 103(3):598-601.

_____, and J.W. Martin. Observations on decapod crustaceans from hydrothermal vent/cold seep sites in the Pacific and Atlantic. Fourth Int. Cong. Syst. Evol. Biol., Univ. MD, College Park, 1-7 July, 1990 (abstract).

_____, and J.J. McDermott. An eastern United States record for the western Indo-Pacific crab, *Hemigrapsus sanguineus* (Crustacea: Decapoda: Grapsidae). Proc. Biol. Soc. Washington 103(1):108-109.

WILLIAMS, Austin B., and N. Ngoc-Ho. *Pomatogebia*, a new genus of thalassinidean shrimps from western hemisphere tropics (Crustacea: Upogebiidae). Proc. Biol. Soc. Washington 103(3):614-616.

1991

Anderson, William D. III, and COLLETTE, Bruce B. Revision of the freshwater viviparous halfbeaks of the genus *Hemirhamphodon* (Teleostei: Hemiramphidae). Ichthyol. Explor. Freshwaters 2(2):151-176.

Bishop, Gale A., and Austin B. WILLIAMS. *Necrocarcinus olsonorum*, new species, a crab (Decapoda: Calappidae) from the Cretaceous Carlile Shale (Turonian), western interior United States. J. Crust. Biol. 11(3):451-459

Boughton, David A., Bruce B. COLLETTE, and Amy R. McCune. Heterochrony in jaw morphology of needlefishes (Teleostei: Belonidae). Syst. Zool. 40(3):329-354.

COHEN, Daniel M. Families Argentinidae (pp. 235-238), Bathylagidae (pp. 239-240), Moridae (pp. 520-523), Bregmacerotidae (pp. 524-525), Gadidae (pp. 526-531), Melanonidae (p. 540). In: Check-list of the Fishes of the eastern Tropical Atlantic, J.C. Quero et al., eds., UNESCO.

COLLETTE, Bruce B. Family Scombridae. (pp. 978-996) In: Check-list of the Fishes of the eastern Tropical Atlantic, J.C. Quero et al., eds., UNESCO.

_____, and N.V. Parin. Shallow-water fishes of Walters Shoals, Madagascar Ridge. Bull. Mar. Sci. 48(1): 1-22.

_____. Families Hemiramphidae (pp. 579-582) and Belonidae (pp. 592-597). In: Check-list of the Fishes of the eastern Tropical Atlantic, J.C. Quero et al., eds., UNESCO.

_____, David G. Smith, and Eugenia B. Böhlke. *Gymnothorax parini*, a new species of moray eel (Teleostei: Muraenidae) from Walters Shoals, Madagascar Ridge. Proc. Biol. Soc. Washington 104(2):344-350.

*MUNROE, Thomas A. Western Atlantic tonguefishes of the *Symphurus plagusia* complex (Cynoglossidae: Pleuronectiformes), with descriptions of two new species. Fish. Bull., U.S. 89(2):247-287.

_____, Martha S. NIZINSKI, and M.N. Mahadeva. *Symphurus prolatinaris*, a new species of shallow-water tonguefish (Pleuronectiformes: Cynoglossidae) from the eastern Pacific. Proc. Biol. Soc. Washington 104(3):448-458.

Van Dover, Cindy Lee, and Austin B. WILLIAMS. Egg size in squat lobsters (Galatheoidea): Constraint and freedom. In: Crustacean Egg Production, Adrian Weener and Armand Kuris, eds., p. 143-156. A.A. Balkema, Rotterdam.

VECCHIONE, Michael. Observations on the paralarval ecology of a euryhaline squid *Lolliguncula brevis* (Cephalopoda: Loliginidae). Fish. Bull., U.S. 89:515-521.

WILLIAMS, Austin B. Comments on the proposed conservation of the specific name of *Artemia franciscana* Kellogg, 1906 (Crustacea, Branchiopoda). Case 2728; see BZN 47:178-183; 48:57) Bull. Zool. Nomencl. 48(3):246-247.

_____, and R.W. Heard. *Upogebia spinistipula*, a new burrowing shrimp from the Florida Shelf, northeastern Gulf of Mexico (Decapoda: Thalassinidea: Upogebiidae). Proc. Biol. Soc. Washington 104(1): 49-54.

_____, and R.B. Moffitt. Crabs from the Mariana Archipelago: *Bothromaia griffini* new genus and species (Brachyura: Majidae), and remarks on *Poupinia hirsuta* Guinot (Homoloidea, Poupiniidae). Proc. Biol. Soc. Washington 104(3):569-582.

1992

Anderson, William D., Jr., Patricia J. Kailola, and Bruce B. COLLETTE. Two new snappers (Teleostei: Lutjanidae: Apsilinae): *Paracaesio paragrapsimodon* Anderson and Kailola from the western Pacific and *P. waltervadi* Anderson and Collette from the western Indian Ocean. Proc. Biol. Soc. Washington 105(3): 443-461.

COLLETTE, Bruce B. Review: Fishes of the Southern Ocean, O. Gon and P.C. Heemstra, eds. BIOMASS Newsletter 13(2):17.

_____, and Gary B. Gillis. Morphology, systematics, and biology of the double-lined mackerels (*Grammatorcynus*, Scombridae). Fish. Bull., U.S. 90:13-53.

_____, N.V. Parin, and Martha S. NIZINSKI. Catalog of type specimens of Recent fishes in the National Museum of Natural History, Smithsonian Institution, 3: Beloniformes (Teleostei). Smithsonian Contrib. Zool. No. 525:16 pp.

Hanlon, R.T., S. v. Boletzky, T. Okutani, G. Perez-Gandaras, P. Sanchez, C. Sousa-Reis, and M. VECCHIONE. Suborder Myopsida Orbigny, 1845. In: "Larval" and Juvenile Cephalopods. A Manual for Their Identification, M.J. Sweeney et al., eds. Smithsonian Contrib. Zool. 513:37-54.

MUNROE, Thomas A. Interdigitation patterns of dorsal-fin pterygiophores and neural spines, an important diagnostic character for symphurine tonguefishes (*Symphurus*: Cynoglossidae: Pleuronectiformes). Bull. Mar. Sci. 50(3):357-403.

PÉREZ FARFANTE, Isabel, and Lori Robertson. Hermaphroditism in the penaeid shrimp *Penaeus vannamei* (Crustacea: Decapoda: Penaeidae). Aquaculture 103:367-376.

RAJAGURU, A. Biology of two co-occurring tonguefishes, *Cynoglossus arel* and *C. lida* (Pleuronectiformes: Cynoglossidae) from Indian waters. Fish. Bull., U.S. 90(2):328-367.

_____, and G. Shantha. Association between the sessile barnacle *Xenobalanus globicipitis* (Coronulidae) and the bottlenose dolphin *Tursiops truncatus* (Delphinidae) from the Bay of Bengal, India, with a summary of previous records from cetaceans. Fish. Bull., U.S. 90:197-202.

Robbins, Timothy W., Bruce B. COLLETTE, and C. Richard Robins. Obituary: Edward C. Raney, 1909-84. Copeia 1992(4):1143-1150.

Roper, Clyde F.E., Michael VECCHIONE, and Michael J. Sweeney. Forward. The Gilbert L. Voss Memorial Issue. Bull. Mar. Sci. 49(1-2):1-4.

VECCHIONE, Michael. A method for examining the structure and contents of the digestive tract in paralarval squids. Bull. Mar. Sci. 49(1-2):300-308.

_____. Dissolved oxygen and the distribution of the euryhaline squid *Lolliguncula brevis*. Bull. Mar. Sci. 49(1-2):668. (abstract).

_____. Long-term trends in the abundance of the copepod *Acartia tonsa* in the Calcasieu Estuary. Contrib. Mar. Sci. 32: 89-101.

_____, and Clyde F.E. Roper. Cephalopods observed from submersibles in the western North Atlantic. Bull. Mar. Sci. 49(1-2):433-445.

_____. *Taningia danae* Joubin, 1931 (Mollusca, Cephalopoda): proposed precedence over *Taningia persica* (Naef, 1923). Bull. Zool. Nomencl. 49(4):261-263.

_____, Bruce H. Robison, and Clyde F.E. Roper. A tale of two species: tail morphology in paralarval *Chiroteuthis* (Cephalopoda: Chiroteuthidae). Proc. Biol. Soc. Washington 105(4):683-692.

WILLIAMS, Austin B. Review: Decapod Crustacea of the Atlantic coast of Canada by Hubert J. Squires. J. Crust. Biol. 12(2):329.

_____, and Richard Wahle. Distinguishing juvenile stages of jonah and Atlantic rock crabs, *Cancer borealis* and *C. irroratus* (Decapoda: Cancridae). J. Crust. Biol. 12(3):464-466.

Young, Richard E., K. Mangold, and Michael VECCHIONE. The enoploteuthid group of families. In: "Larval" and Juvenile Cephalopods. A Manual for Their Identification, M.J. Sweeney et al., eds. Smithsonian Contrib. Zool. 513:55-66.